890GMH/USB3

AMD 890GX + SB710 Chipsets

ASRock
www.asrock.com

Product Brief

- ASRock DuraCap (2.5 x longer life time), 100% Japan-made high-quality Conductive Polymer Capacitors
- Supports ASRock Turbo UCC
- Supports Dual Channel DDR3 1800(OC)
- Supports ATI™ Hybrid CrossFireX™
- Integrated AMD Radeon HD 4290 graphics, DX10.1 Class iGPU, Shader Model 4.1, Max. shared memory 512MB
- Multi VGA Output options: D-Sub, DVI-D and HDMI
- 5 x SATA2 connectors, 1 x eSATA2 Connector, 1 x USB 3.0 port, PCIE Gigabit LAN
- Supports ASRock Instant Boot, Instant Flash, OC Tuner, IES, OC DNA, AIWI, APP Charger
- 7.1 CH HD Audio with Content Protection (Realtek ALC892 Audio Codec), Premium Blu-ray audio support
- ErP/EuP Ready
- Free Software : CyberLink DVD Suite - OEM and Trial; Creative Sound Blaster X-Fi MB - Trial

The specification is subject to change without notice. The brand and product names are trademarks of their respective companies. Any configuration other than original product specification is not guaranteed.

Detail Specification

Platform	- Micro ATX Form Factor: 9.6-in x 9.0-in, 24.4 cm x 22.9 cm - All Solid Capacitor design (100% Japan-made high-quality Conductive Polymer Capacitors)
CPU	- Support for Socket AM3 processors: AMD Phenom™ II X6 / X4 / X3 / X2 (except 920 / 940) / Athlon II X4 / X3 / X2 / Sempron processors - Six-Core CPU Ready - Supports ASRock UCC - Unlock CPU Core - Supports AMD's Cool 'n' Quiet Technology - FSB 2600 MHz (5.2 GT/s) - Supports Untied Overclocking Technology - Supports Hyper-Transport 3.0 (HT 3.0) Technology
Chipset	- Northbridge: AMD 890GX - Southbridge: AMD SB710
Memory	- Dual Channel DDR3 memory technology - 4 x DDR3 DIMM slots - Supports DDR3 1800(OC)/1600(OC)/1333/1066/800 non-ECC, un-buffered memory - Max. capacity of system memory: 16GB
Expansion Slot	- 1 x PCI Express 2.0 x16 slots (blue @ x16 mode) - 1 x PCI Express 2.0 x1 slot - 2 x PCI slots - Supports ATI™ Hybrid CrossFireX™
Graphics	- Integrated AMD Radeon HD 4290 graphics - DX10.1 class iGPU, Shader Model 4.1 - Max. shared memory 512MB - Multi VGA Output options: D-Sub, DVI-D and HDMI - Supports HDMI Technology with max. resolution up to 1920x1200 (1080P) - Supports Dual-link DVI with max. resolution up to 2560x1600 @ 75Hz - Supports D-Sub with max. resolution up to 2048x1536 @ 85Hz - Supports HDCP function with DVI and HDMI ports - Supports Full HD 1080p Blu-ray (BD) / HD-DVD playback with DVI and HDMI ports
Audio	- 7.1 CH HD Audio with Content Protection (Realtek ALC892 Audio Codec) - Premium Blu-ray audio support
LAN	- PCIE x1 Gigabit LAN 10/100/1000 Mb/s - Realtek RTL8111DL - Supports Wake-On-LAN
Rear Panel I/O	I/O Panel - 1 x PS/2 Keyboard Port - 1 x VGA/D-Sub Port - 1 x VGA/DVI-D Port - 1 x HDMI Port - 1 x Optical SPDIF Out Port - 5 x Ready-to-Use USB 2.0 Ports - 1 x eSATAII Connector - 1 x Ready-to-Use USB 3.0 Port - 1 x RJ-45 LAN Port with LED (ACT/LINK LED and SPEED LED) - HD Audio Jack: Rear Speaker / Central / Bass / Line in / Front Speaker / Microphone
USB 3.0	- 1 x USB 3.0 port by Fresco FL1000G, supports USB 3.0 up to 5Gb/s
Connector	- 5 x Serial ATAII 3.0 Gb/s connectors, support RAID (RAID 0, RAID 1, RAID 10 and JBOD), NCQ, AHCI and "Hot Plug" functions - 1 x ATA133 IDE connector (supports 2 x IDE devices) - 1 x Floppy connector - 1 x IR header - 1 x COM port header - CPU/Chassis/Power FAN connector - 24 pin ATX power connector - 4 pin 12V power connector - CD in header - Front panel audio connector - 3 x USB 2.0 headers (support 6 USB 2.0 ports)
BIOS Feature	- 8Mb AMI Legal BIOS - Supports "Plug and Play" - ACPI 1.1 Compliance Wake Up Events - Supports jumperfree - SMBIOS 2.3.1 Support - VCCM, NB, SB Voltage Multi-adjustment
Support CD	- Drivers, Utilities, AntiVirus Software (Trial Version), AMD OverDrive™ Utility, AMD Live! Explorer, ASRock Software Suite (CyberLink DVD Suite - OEM and Trial; Creative Sound Blaster X-Fi MB - Trial)

Unique Feature	- ASRock OC Tuner
	- Intelligent Energy Saver
	- Instant Boot
	- ASRock Instant Flash
	- ASRock OC DNA
	- ASRock AIWI
	- ASRock APP Charger
	- Hybrid Booster:
	  - CPU Frequency Stepless Control
	  - ASRock U-COP
	  - Boot Failure Guard (B.F.G.)
	- Turbo 25 / Turbo 30 GPU Overclocking

Hardware Monitor	- CPU Temperature Sensing - Chassis Temperature Sensing - CPU/Chassis/Power Fan Tachometer - CPU Quiet Fan - Voltage Monitoring: +12V, +5V, +3.3V, Vcore
OS	- Microsoft® Windows® 7 / 7 64-bit / Vista™ / Vista™ 64-bit / XP / XP Media Center / XP 64-bit compliant
Certifications	- FCC, CE, WHQL - ErP/EuP Ready (ErP/EuP ready power supply is required)
Accessories	- Quick Installation Guide, Support CD, I/O Shield - ATA 133 Cable - 2 x SATA Data Cables (Optional)

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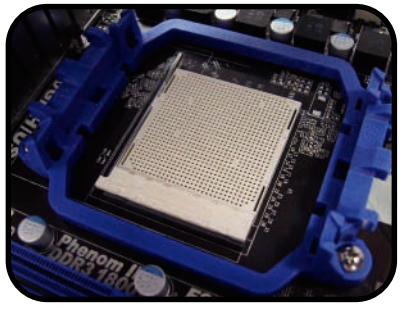
USB3.0

USB3.0, the world's best-known computer peripheral interface once again receives a major revamp to stay current with today's most demands for connectivity bandwidth. Delivering data transfer rates up to ten times faster than USB 2.0 with the optimized power efficiency, USB 3.0 promises a major leap forward in transfer speeds and capability.

Turbo UCC technology provides you an all-in-one solution to unlock the hidden cpu cores in the CPU, get the amazing system performance boost by auto-overclocking, and running the system in a certainly lower power consumption level as well. When you press "X" when switch on the computer, the system will automatically reboot itself, after that, the system will execute the Turbo UCC function. Enabling Turbo UCC, it will automatically help you to unlock the extra CPU core to enjoy an instant performance boost, and the system performance will boost up by overclocking CPU frequency, memory frequency and all related voltage settings! Different from normal high-energy consumption for overclocking or system upgrading process, ASRock Turbo UCC can allow an energy-saving overclocking or system upgrade computing operation!

Phenom II X6
6-Core CPU Ready



ASRock DuraCap
100% All Solid Capacitor design

ASRock DuraCap (2.5x longer life time), 100% Japan-made high-quality Conductive Polymer Capacitors

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ATI Radeon® HD4290
DirectX 10.1 Onboard Graphics

Key features of DirectX 10.1 include an updated shader model, improved anti-aliasing support, more flexible data access, and tighter specifications for better applicationcompatibility.

DirectX 10.1 Anti-Aliasing

DirectX 10 –Standard MSAA:Foliage edges do not get anti-aliased –causes shimmering and crawling when they move

DirectX 10.1 –Alpha Test MSAA:Foliage edges are smoothed and anti-aliased –offers significant image quality improvement

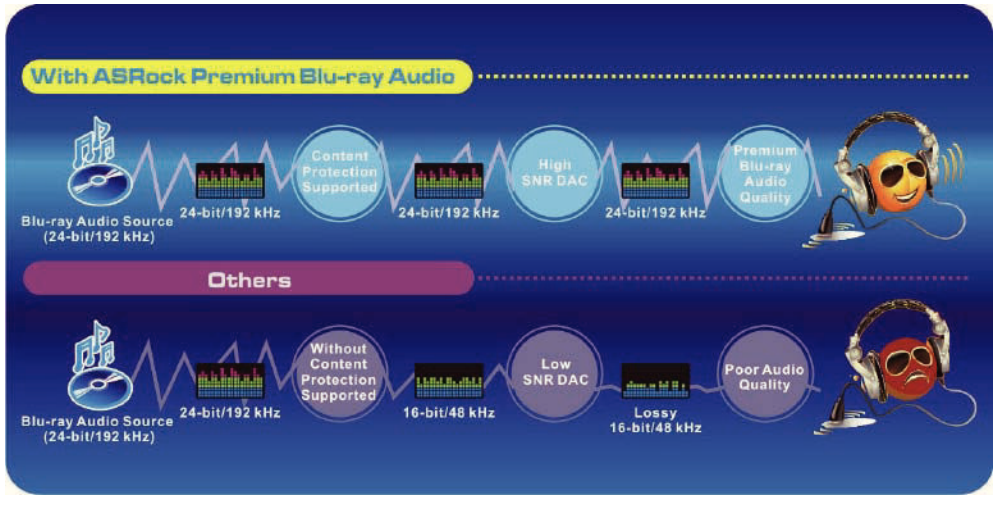
Features	DirectX® 10	DirectX® 10.1
Shader Model	4	4.1
Separate per-MRT blend modes	No	Yes
Pixel Coverage Masks	No	Yes
Sample Pattern Selection	No	Yes
Cube Map Arrays	No	Yes
Gather4	No	Yes
VS Inputs	16	32
Blending	INT8, FP16/32	INT8/16, FP16/32
Filtering	FP16	FP32

Premium Blu-ray Audio

Premium Blu-ray Audio
Support 24-bit / 192 kHz

Premium Blu-ray Audio, an outstanding technology developed on ASRock motherboard, provides the excellent audio output of 24-bit/192 kHz with its respective Blu-ray DRM compatible driver/software. With Content Protection-Support and High SNR DAC, the Blu-ray entertainments can be played in a high quality of 24-bit/192KHz. In other words, if you are using a device without the Blu-ray Audio support, the audio quality will be downgraded to 16-bit/48kHz like a regular CD quality. To deliver the best possible sound solution for today's most demanding users, ASRock Premium Blu-ray Audio motherboard is the best choice for users who are particularly desired to enjoy the pure HD audio. ASRock users are able to take full advantages of our Blu-ray Audio motherboards. Choose ASRock, choose Pure HD audio!

Why ASRock?



* SNR: Signal-to-Noise Ratio.

True Blu-ray

Full HD 1080p
Blu-ray(BD)/HD-DVD playback

Premium Blu-ray Audio
Support 24-bit / 192 kHz

Blu-ray video + Blu-ray audio

(Integrated AMD Radeon HD 4290 graphics, supports DX10.1)

Supporting Blu-ray Full HD 1080p playback and Premium Blu-ray audio with 24-bit / 192KHz sampling rate in 7.1 channel

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ASRock AIWI software introduces a new way of PC gaming operation. ASRock AIWI is the world's first software to turn your iPhone/iPod touch as a game joystick to control your PC games. Just to install the ASRock AIWI software on your ASRock motherboard, connect your PC and apple devices via Bluetooth or WiFi networks, then you can start experiencing the exciting motion controlled games.

ASRock AIWI Quick Start Guide

Step 1.

Download and install the ASRock AIWI PC software on ASRock PC:

AIWI
ASRock AIWI Utility

Step 2.

Free download AIWI-Lite from App Store and install to your iPhone / iPod Touch:

AIWI
AIWI-Lite for iPhone

Step 3.

Connect your iPhone / iPod touch with ASRock PC via WiFi or bluetooth.

Step 4.

Execute ASRock AIWI software on the PC and log in to register to become a new AIWI member, then you can receive continues new games update.

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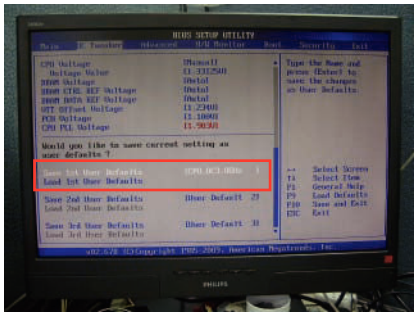
OC DNA

Save your OC settings as a profile and share with friends. Try OC DNA now!

OC DNA Instruction

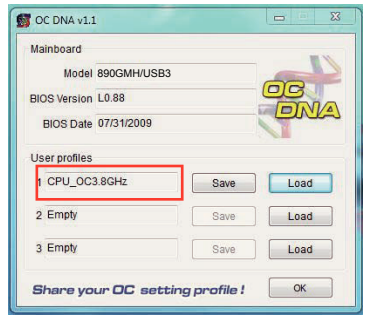
Step 1

Save your BIOS OC settings as User Default in BIOS OC Tweaker menu. (For example: we name this User Default setting as “CPU_OC3.8GHz”)



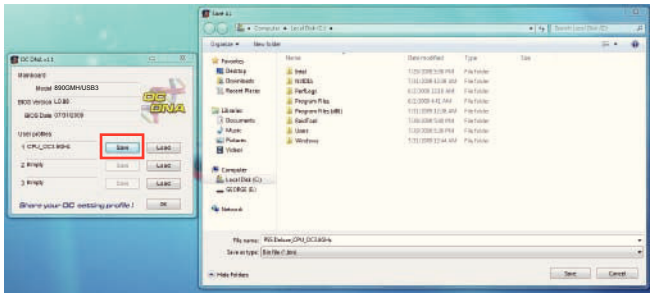
Step 2

Execute ASRock OC DNA under OS, you will find “CPU_OC3.8GHz” as User Profile 1.



Step 3

Press “Save” button to save the “CPU_OC3.8GHz” OC settings as a profile.

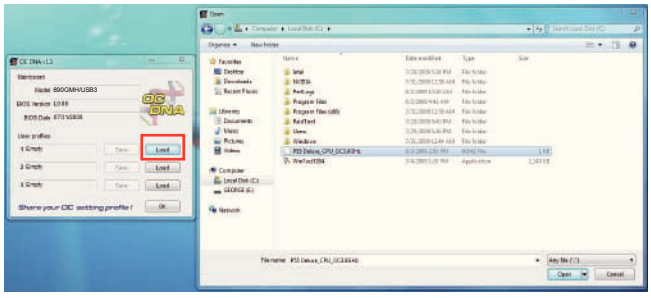


Step 4

Send the “CPU_OC3.8GHz” profile to other friends.

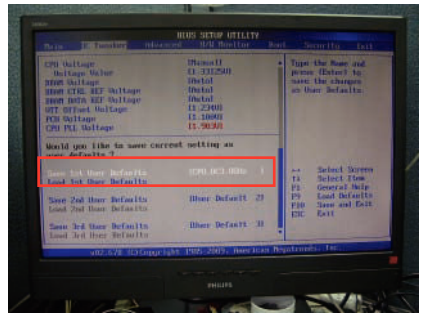
Step 5

When the friend receives your “CPU_OC3.8GHz” profile, he can press “Load” to load the “CPU_OC3.8GHz” profile in OC DNA.



Step 6

After that, the friend can enter into BIOS OC Tweaker menu to load the “CPU_OC3.8GHz” profile as his BIOS OC settings.



Now, you have successfully share your OC setting profile with your friends.

*The OC DNA works only when users use the same motherboard and BIOS version.

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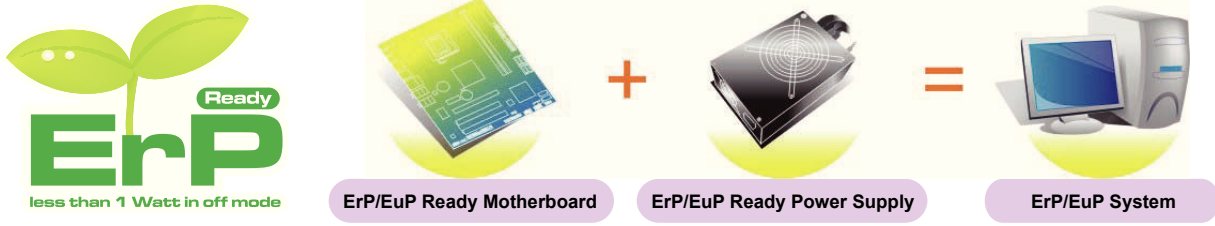


What is ErP/EuP?

ErP/EuP, stands for Energy Using Product, was a provision regulated by European Union to define the power consumption for the completed system. With the great quantity and the popularly using of the electrical products nowadays and the continuously increasing of the electrical products categories in the following 20 to 30 years, European Union decided to establish an effective strategy to solve the energy consumption problem. That is, according to ErP/EuP, the total AC power of the completed system shall be under 1.00W in off mode condition.

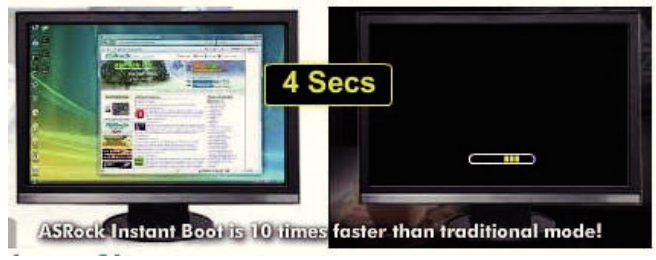
ASRock Instant Boot

ASRock Instant Boot is a new feature invented exclusively by ASRock.
It can boot up system in an amazing speed,
which is 10 times faster than traditional boot up. For home users or office PC users, ASRock Instant Boot can also
guarantee a clean Windows OS, and consumed less power! For details:
http://www.asrock.com/feature/InstantBoot/index.asp

* This function is applicable ONLY to single user that does not secure ID and Password to their systems.
* The boot up time depends on the hardware configuration.

10 Times Faster, Only 4 Secs to Boot Up to Windows!

ASRock YouTube
http://tw.youtube.com/watch?v=BucljXZVxXo



ASRock Instant Flash

ASRock Instant Flash is an exclusive and the most user-friendly BIOS flash utility developed by ASRock. It is embedded in Flash ROM which is used to update the system BIOS without having to enter operating systems like MS-DOS or Windows.

Instant BIOS Flash
Instant Flash BIOS Utility

Features

Once executing ASRock Instant Flash, the utility will automatically detect all devices such as USB, hard disk or even floppy drive to find the exact BIOS for your system. Instead of giving you all BIOS in your devices, the Instant Flash just list BIOS versions that apply to your motherboard model only. For example, if you have many different BIOS of different motherboards saved in your devices, but you just need to flash your P45 motherboard, the Instant Flash will just list the P45 BIOS versions for you. This unique function allows you to easily select the suitable BIOS version instead of browsing through all data.

Instant Flash just list BIOS versions that apply to your motherboard model.

Simple!

Click and start Flashing!

Quick!

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FREE Bundle
ASRock Software Suite
CyberLink Power2Go 6.1 LE OEM
CyberLink MediaShow 4.1 SE OEM
CyberLink PowerDVD 8.0 DTS Trial
CyberLink PowerDirector 8.0 Trial
CyberLink PowerBackup 2.5 Trial
Creative Sound Blaster X-Fi MB Trial

CyberLink

X-Fi XTREME FIDELITY

EAX ADVANCED HD 4.0

CyberLink Power2Go 6.1 LE OEM

Power2Go 6 lets you burn and backup videos, photos, music and data onto Blu-ray Discs and DVDs.

CyberLink MediaShow 4.1 SE OEM

Photo and video management software MediaShow edits videos and photos instantly, creates slideshow, and allows publishing directly to YouTube and Flickr.

CyberLink PowerDVD 8.0 DTS Trial

World-renowned PowerDVD 8 DTS delivers outstanding DVD movie playback quality on your PC.

CyberLink PowerDirector 8.0 Trial

PowerDirector - Video Editing software – edits high-definition videos including AVCHD, allows output to PSP iPod and Blu-ray Disc.

CyberLink PowerBackup 2.5 Trial

PowerBackup backups valuable data on your PC.

Creative Sound Blaster X-Fi MB Trial

The Sound Blaster X-Fi MB solution provides premium audio quality, effects and features for PC systems equipped with onboard audio.

For gamers, the EAX® ADVANCED HD 4.0, with its state-of-the-art Multi-Environment rendering and reverb modelling, delivers a much more realistic and immersive 3D gaming experience than your motherboard audio ever will.